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(54) **OPTICAL TRANSMISSION LINE MONITORING METHOD**

an excitation light source 11.

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(57) Abstract:

PURPOSE: To immediately interrupt main signals when an optical line breaks or when the electric power of the main signals lowers.

CONSTITUTION: A monitoring signal is transmitted to an opposite direction from the main signal through a monitoring light source 21 of a receiver 20 and an optical circulator 22 to a single mode optical fiber optical line 30 by which the main signal is transmitted from a transmitter 10 to the receiver 20, and the monitoring signal is transmitted while being amplified by induced Brillouin amplification based on the electric power of the main signal. Then, optical amplification on the side of the transmitter 10 is stopped and the main sign is interrupted by judging the break of the optical line 30 and the lowering of the electric power of the main signal from the electric power of the monitoring signal to be detected through an optical circulator 12 of the transmitter 10 at a monitoring light monitor 13 and stopping the operation of a driving circuit 14 and

